

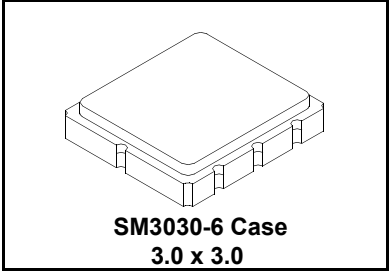


- **Ideal Front-End Filter for European Wireless Receivers**
- **Low-Loss, Coupled-Resonator Quartz Design**
- **Simple External Impedance Matching**
- **Complies with Directive 2002/95/EC (RoHS)**
- **Tape and Reel Standard per ANSI/EIA-481**
- **Moisture Sensitivity Level: 1**
- **AEC-Q200 Qualified**

RoHS
Compliant

RF3414E

**372.5 MHz
SAW Filter**



The RF3414E is a low-loss, compact, and economical surface-acoustic-wave (SAW) filter designed to provide front-end selectivity in 372.5 MHz receivers. Receiver designs using this filter include superhet with 10.7 MHz or 500 kHz IF, direct conversion and superregen. Typical applications of these receivers are wireless remote-control and security devices operating in Europe under ETSI I-ETS 300 220, in Germany under FTZ 17 TR 2100, in the United Kingdom under DTI MPT 1340 (for automotive only), in France under PTT Specifications ST/PAA/TPA/AGH/1542, and in Scandinavia.

This coupled-resonator filter (CRF) uses selective null placement to provide suppression, typically greater than 40 dB, of the LO and image spurious responses of superhet receivers with 10.7 MHz IF. RFMi's advanced SAW design and fabrication technology is utilized to achieve high performance and very low loss with simple external impedance matching (not included).

Characteristic		Sym	Notes	Minimum	Typical	Maximum	Units
Center Frequency @ 25°C	Absolute Frequency	f _C		372.420	372.5	372.580	MHz
Insertion Loss		IL			2.4	3.0	dB
3 dB Bandwidth		BW ₃		300	400	500	kHz
Rejection	0 - 354 MHz			40	43		dB
	354 - 364 MHz			35	38		
	364 - 369 MHz			25	28		
	369 - 370 MHz			14	17		
	374 - 378 MHz			25	28		
	378 - 380 MHz			15	18		
	380 - 382 MHz			20	23		
	382 - 389 MHz			25	28		
	389 - 1000 MHz			40	43		
Temperature	Freq. Temp. Coefficient	FTC			0.032		ppm/°C ²
Frequency Aging	Absolute Value during the First Year	fA			<±10		ppm/yr
Impedance @ f _C	Input Z _{IN} = R _{IN} /C _{IN}	Z _{IN}		887Ω // 4.7pF			
	Output Z _{OUT} = R _{OUT} /C _{OUT}	Z _{OUT}		908Ω // 4.0pF			
Lid Symbolization (in addition to Lot and/or Date Codes)		720, YWWS					
Standard Reel Quantity	7 Inch Reel			500 Pieces/Reel			
Standard Reel Quantity	13 Inch Reel			3000 Pieces/Reel			



CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

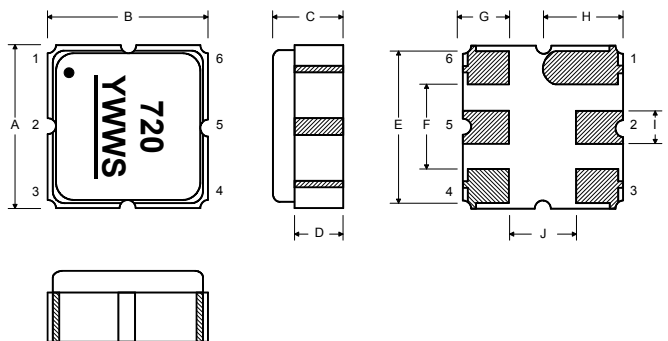
NOTES:

1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.
3. RoHS compliant from the first date of manufacture.

Rating	Value	Units
Input Power Level	10	dBm
DC Voltage	12	VDC
Storage Temperature	-40 to +125	°C
Operable Temperature Range	-40 to +125	°C
Soldering Temperature	(10 seconds / 5 cycles max.)	260 °C

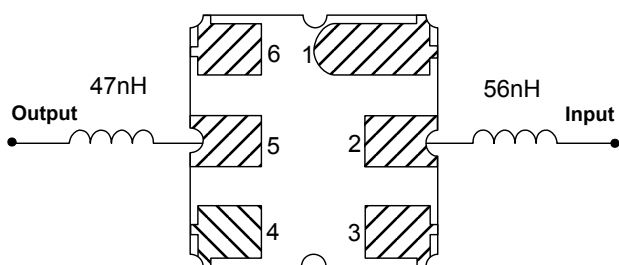
Electrical Connections

Pin	Connection
1	Input Ground
2	Input
3	Ground
4	Output Ground
5	Output
6	Ground



Case Dimensions

Matching Circuit to 50Ω



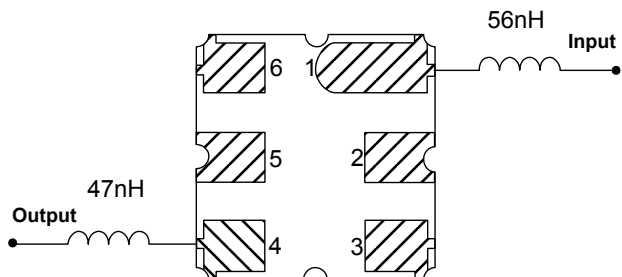
Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	2.87	3.0	3.13	0.113	0.118	0.123
B	2.87	3.0	3.13	0.113	0.118	0.123
C	1.12	1.25	1.38	0.044	0.049	0.054
D	0.77	0.90	1.03	0.030	0.035	0.040
E	2.67	2.80	2.93	0.105	0.110	0.115
F	1.47	1.6	1.73	0.058	0.063	0.068
G	0.72	0.85	0.98	0.028	0.033	0.038
H	1.37	1.5	1.63	0.054	0.059	0.064
I	0.47	0.60	0.73	0.019	0.024	0.029
J	1.17	1.30	1.43	0.046	0.051	0.056

OPTIONAL

Electrical Connections

Pin	Connection
1	Input
2	Input Ground
3	Ground
4	Output
5	Output Ground
6	Ground

Matching Circuit to 50Ω



Recommended Reflow Profile

1. Preheating shall be fixed at 150~180°C for 60~90 seconds.
2. Ascending time to preheating temperature 150°C shall be 30 seconds min.
3. Heating shall be fixed at 220°C for 50~80 seconds and at 260°C +0/-5°C peak (10 seconds).
4. Time: 5 times maximum.

